California Integrated Waste Management Board
Recycling and Waste Management Infrastructure Project

Approach to Designing the
Infrastructure Project Web Site

January 30, 2009

This paper describes a preliminary approach to designing the Recycling and Waste Management Infrastructure Project (Infrastructure Project) Web Site, which will be part of the Board's existing Web Site.

The web site is intended to provide a central portal to expanded information on California waste management and recycling facilities. The web site will have several features that allow users to access data on individual facilities as well as aggregated data and information at the county, multi-county or state levels. The following two sections describe a preliminary approach to delivering this information and some key considerations in designing the Infrastructure Project Web Site.

This preliminary approach will be refined based on stakeholder input and further evaluation of alternatives in early 2009. The completed Infrastructure Project Website is targeted for rollout in April 2010.

Preliminary Web Site Design

The home page of the Infrastructure Project Web Site will likely show a map of California with a range of default infrastructure facilities shown. The map will be interactive so users can change the geographic area and types of information shown. Preliminarily, we envision that users will be able to:

■ Limit the facilities shown on the map by selecting counties or pre-defined regions, providing a clearer map and eliminating from view areas that may not be of interest

Examples[*]: http://availableproperty.seda.org/

http://www.sterigenics.com/locations/

http://www.apartments.com/California

These sites allow users to select specific geographic regions for further analysis. In the Board's Infrastructure Project Web Site, we expect users will be able to zoom in on an area, or pick the state as a whole, for further analysis.

■ Limit the facilities shown on the map by selecting desired facility categories and/or limiting other facility options

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[*] Examples are provided to demonstrate design concepts and are <u>not</u> intended to show what the Infrastructure Project Web Site will look like.

R·W·BECK

Examples[*]:   http://availableproperty.seda.org/

http://www.dec.ny.gov/outdoor/45415.html

http://www.apartments.com/Rent.aspx?rgn1=20&rent_minimum=0&rent_maximum=99999&state=ca&page=subarea&prvpg=3&type_listing=1&Area1=Y&Area2=Y&Area4=Y&Area5=Y&Area6=Y&Area7=Y&Area8=Y&Area9=Y&Area3=Y&Area10=Y

http://neighborhoods.realtor.com/San-Jose/2310/Metro

These sites allow users to specify characteristics for the items they want to find.

■ See the location of different types of facilities on a map, with different categories of facilities identified by color or icon

Examples[*]:   http://www.i-maps.com/hotel-locator/usa/hotels/CA/Sacramento.html?AM=11&AD=18&DM=11&DD=20&ADL=1&CLD=0&MC=1&FR=1.34

http://www.bop.gov/locations/maps/SER.jsp

http://www.dot.state.tx.us/mnt/sra/map.htm

These sites show points of interest using different colors and/or shapes.

■ View, print, or download a listing of the selected/visible facilities

Example[*]:   http://availableproperty.seda.org/

After searching this website, the "Results Detail" section of the results tab shows an example of one way to view, print, or download a listing of selected items.

■ Select a specific facility to view, print, or download detailed information about it

Examples[*]:   http://www.containerstore.com/find/index.jhtml

http://www.apartments.com/Results.aspx?page=results&rgn1=20&state=ca&area1=y&area2=y&area4=y&area5=y&area6=y&area7=y&area8=y&area9=y&area3=y&area10=y&prvpg=5&Rent_Minimum=0&Rent_Maximum=99999

http://www.dot.state.tx.us/mnt/sra/map.htm

These examples show web sites that bring up detailed information about a selected point of interest.

■ View, print, or download the map image

Example[*]:   http://availableproperty.seda.org/

This site allows users to view, print, or save the map.

■ View, print, or download aggregated waste management and recycling information for a specified region (the system may default to larger regions when aggregating data to address confidentiality concerns). Aggregate information includes the results of model runs

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describing projected waste generation and infrastructure capacity shortfalls under a range of scenarios. In addition to the pre-packaged model results, users would be able to request Board Staff to investigate user-defined scenarios. See Approach to Modeling Waste Generation and Infrastructure Needs for more details.

- Click links to navigate to other parts of the Board's web site
- View details about when and how the data were obtained

Considerations for Designing the Infrastructure Project Web Site

In developing the above preliminary recommendations, Board Staff and R.W. Beck are taking into account the following considerations:

Direction Given in the Board-Approved Scope of Work

The Board-approved scope of work in the project Request for Proposals identifies that the Infrastructure Project Web Site shall:

- Be a system to collect the infrastructure information on an ongoing basis;
- Interactively display the infrastructure information and model outputs for stakeholders (e.g., data summaries, databases, GIS maps, etc); and
- Allow internal and external users to:
  - Locate infrastructure facilities by map location and other characteristics
  - Access a database on the baseline information for reference and planning purposes
  - Develop model calculations of future needs

Design Principles

Following are the some design principles that will govern design of the Infrastructure Project Web Site. Because website design involves tradeoffs, the extent to which each of these principles can be achieved may vary. (A broader set of Goals and Guiding Principles has also been developed to guide the overall project.)

- Deliver the types of information in the way most useful to meet identified user needs and priorities.
- Consider using existing Board technologies in implementing the new site to ensure efficient development except when another tool provides better options.
- Design the tool so it works similarly to other Board tools so its operation is intuitive and familiar to users.
- Provide a single access point to key existing Board information on solid waste management, recycling facilities, and the like.
- Abide by the project's confidentiality policy to ensure sensitive company data is never released.
- Clearly identify the age of reported data and identify important caveats.

- Integrate website management into existing Board programs to the extent possible to reduce new staff burdens and costs

- Ensure that the site is easy to use by the vast majority of users, assuming Internet connections and computer software that is commonly in use

- Ensure that the site functions consistently without errors or other user problems